

Statewide Network

Network Consolidation Study

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Background

The 2003 *State Strategic Plan for Information Resources Management: Building A New Framework for the Enterprise*¹ recognized that consolidation of common agency information resources presented an opportunity for meeting the guiding principles and mission of promoting better information resource management. The State Strategic Plan also acknowledged that state budget constraints require more efficient use of information technology and increases the demand for precise performance metrics and accountability related to information resources.

The 78th Legislature enacted Senate Bill 1701 directing DIR to examine and report on strategies to more effectively utilize the state's technology infrastructure. In response to that directive, DIR explored the existing technology infrastructure among state agencies and shared the results in *A Foundation for Change: Leveraging A Statewide Technology Infrastructure*². The Foundation Report closely examined the existing network infrastructure of state agencies.

Among the findings in the report:

- There are 20 independent statewide networks managed by various state agencies.
- There are duplicate network management functions across these networks: including administration, planning and technical support.
- A centralized enterprise solution can ensure a more efficient use of network resources.

In September 2004, DIR and HHSC completed an interagency agreement to consolidate the management and maintenance of HHSC's Wide Area Network. HHSC estimates that the consolidation will provide cost savings of \$3.5 million over five years. In addition, the transfer of HHSC's WAN management staff enhances DIR's knowledge base and skill set for WAN management, allowing DIR to offer an enterprise-wide WAN management service to agencies throughout the state.

The Foundation Report called for a Statewide Network Consolidation Study that would review options for consolidating other state networks based upon results and lessons learned from transferring the management of the Health and Human Services Commission (HHSC) Wide Area Network to DIR. The purpose of this study is to identify where the state can save money by consolidating statewide network services.

¹ *Building a New Framework for the Enterprise: State Strategic Plan for Information Resource Management*. Department of Information Resources, November 1, 2003. Available at <http://www.dir.state.tx.us/pubs/ssp2003/index.htm>

² *A Foundation for Change: Leveraging a Statewide Information Infrastructure*. Department of Information Resources, May 28, 2004. Available at <http://www.dir.state.tx.us/pubs/foundation/index.htm>

Methodology

The primary focus of the study was to identify those categories of agency WAN Management that could be consolidated, providing potential cost savings to the agency and the state. The DIR/HHSC WAN consolidation revealed that cost savings could be gained through staff reductions and consolidation of network monitoring tools and equipment maintenance.

To determine the potential operational and financial benefits of consolidating state agency Wide Area Networks (WANs), DIR examined the WAN management operations of the Comptroller of Public Accounts (CPA), the Office of Attorney General (OAG) Child Support Division (CSD), and the Texas Department of Transportation (TXDOT). The analysis began by reviewing the Statewide Information Technology Asset Report (SITAR) data for each of these agencies. Follow-up interviews with agency staff clarified their responses and augmented the data from SITAR.

Financial data from the agencies was compared to DIR management costs derived from DIR WAN Service charges for Site Circuit and Router Management. DIR has established a WAN Scope of Services that offer Site Circuit and Router Management for \$95 per site/per month that includes router maintenance. In addition, DIR WAN Services can manage WAN Hubs and Remote Access Server Sites for \$214 per month.

Analysis of the agencies' data confirmed potential cost savings through WAN staff reductions and the consolidation of WAN monitoring tools and equipment maintenance. (Broad assumptions for staff reductions were based on the experience with HHSC WAN consolidation.)

DIR projects annual WAN management consolidation savings totaling \$1.6 million per year from WAN management of HHSC and the three reviewed agencies. The review reflects a 31% savings for operational expenses and a 36% reduction in WAN staff. Additional savings for fringe benefits and other overhead expenses (approximately 28% of salary statewide), as well as future circuit consolidation and other potential efficiencies are not included.

Table 1 highlights the yearly savings for DIR management of each agency's WAN.

TABLE 1. YEARLY NETWORK CONSOLIDATION SAVINGS WITH DIR WAN MANAGEMENT

Agency	Agency WAN Total	DIR WAN Mgt Total	Annual WAN Savings
HHSC ¹	\$3,004,236	\$2,311,337	\$692,899
CPA	\$155,032	\$60,720	\$94,312
OAG	\$280,148	\$180,432	\$99,716
TXDOT	\$1,840,024	\$1,084,584	\$755,440
TOTAL	\$5,279,440	\$3,637,073	\$1,642,367

1. HHSC Projected Yearly Savings includes Fringe Benefit Savings.

It is expected that DIR WAN service rates will decline as statewide WAN management leads to additional economies of scale and discounted costs. Should DIR rates fall 10%, cost savings for WAN management are expected to increase to \$1.75 million per year.

Findings

FINANCIAL SAVINGS TO THE STATE

Preliminary analysis offers evidence of cost savings if enterprise WAN management is implemented. Estimated cost savings come from agency FTE reductions and reduced costs due to enterprise-wide network monitoring tools and equipment maintenance.

The study estimates yearly savings to the state of \$1.6 million through consolidation of the WANs of HHSC, CPA, OAG, and TXDOT. Additional savings would be realized as DIR WAN service costs are reduced over time. The addition of other large state agencies would expand the benefits of enterprise WAN management leading to anticipated savings of \$1.75 million-\$1.9 million per year.

Enterprise WAN management will allow network enhancements and implementation of new technologies once versus many times across individual agencies.

BENEFITS TO COUNTIES

Previous research indicates a potential for enhanced services and cost savings to counties due to the consolidation of state agency network resources within county facilities.³ Eighteen state agencies currently have, or plan to have, network connections within county facilities.

The Texas Association of Counties has continually expressed an interest in leveraging state information resources to improve intergovernmental collaboration. A state enterprise network enhances the opportunities for consolidating state agency network resources and may facilitate local and state government collaborative efforts.

SITAR VALIDATION

The WAN section of SITAR data needs more accurate definitions and more precise detail in order to provide reliable data for analysis.

Because SITAR data does not provided itemized costs for network monitoring tools and equipment maintenance, it is difficult to extrapolate potential cost savings across all state agencies. However, SITAR data does provide FTE costs for agency WANs that totaled 114.2 FTEs with a budget of \$5,346,021. If every state agency adopted the enterprise WAN approach enabling them to reduce WAN FTEs by 36%, yearly savings of more than \$1.6 million could be realized.

³ *County Initiative Study*. Department of Information Resources internal study, 2004.

Determining savings from consolidation of WAN equipment maintenance and network monitoring tools would require additional research.

POTENTIAL FOR ADDITIONAL SAVINGS

As WAN consolidation is implemented statewide, additional cost savings can be realized through:

- Reduced fringe benefits associated with FTE reductions.
- Circuit Optimization.
- Consolidation of duplicate circuits for multiple agencies at co-located facilities. Circuit consolidation may also benefit county and other governmental entities currently sharing facilities with state agencies.
- Negotiations for services/equipment within a larger enterprise environment will reduce procurement costs.

Next Steps

In their *Strategic Plan for State Government Telecommunications Services, 2004-2009*⁴, the Telecommunications Planning and Oversight Council (TPOC) has recognized network consolidation as a primary strategy to optimize state information resource investments.

DIR will continue to study network consolidation opportunities and examine its existing rate structure for WAN services to determine the optimal and appropriate costs for services. DIR will also explore additional enterprise services and solutions based on the needs of its current and future customers.

As the consolidation with HHSC revealed, determining precise cost savings requires detailed analysis and further due diligence. DIR will work cooperatively with state agencies to conduct a more comprehensive assessment of SITAR and gather additional data to ascertain cost savings inherent in enterprise WAN management. To aid this effort, DIR has release a Request for Offer (RFO) seeking professional services in the evaluation, assessment, and estimation of consolidation of state agency Wide Area Networks.

⁴ *Strategic Plan for State Government Telecommunications Services 2004-2009*. Telecommunications and Planning Oversight Council, October 1, 2004. Available at www.dir.state.tx.us/pubs/tpoc/2004stratplan.pdf.